

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A communication local area network in a building for providing simultaneous packet based digital data- and analog telephone communication between a central location in the building and at least one remote location in the building, the communication network comprising:

a central digital device,

a central analog telephone device and,

for each remote location - a remote digital device, a remote analog telephone device and a local area network cable having a remote end at the respective remote location and a near end at the central location;

said cable including at least two pairs of conductors, each pair operative as a data channel for carrying packet based digital data signals between said remote digital device and said central digital device and said at least two pairs cooperatively forming a phantom channel, operative to carry analog telephone signals between said remote analog telephone device and said central analog telephone device.

2. (currently amended) The network of claim 1, further comprising, for each remote location, two signal transformers. at each end of said cable, each signal transformer having a primary winding and a secondary winding and being operative to pass only packet based digital data signals, the primary winding having a center-tap, wherein the two conductors of

each of said pairs are connected at each of their ends to the ends of the primary winding of a corresponding one of said transformers and wherein:

the ends of the respective secondary winding of each of said two transformers at the remote end of said cable are connected to the respective remote digital device;

the ends of the respective second winding of each of said two transformers at the near end of said cable are connected to the central digital device;

said center-taps of each of said two transformers at the remote end of said cable cooperatively form a remote port of said phantom channel and are connected to the respective remote telephone device; and

said center-taps of each of said two transformers at the near end of said cable cooperatively form a central port of said phantom channel and are connected to the central telephone device.

3. (original) The network of claim 2, further comprising, for at least one remote location, a wall outlet, directly or indirectly attached to a wall and containing said two transformers for connecting to the remote end of said cable.

4. (currently amended) The network of claim 3, wherein said wall outlet is dimensioned to ~~conform to an existing~~be installed in a cavity for a wall connector of a data communication network.

5. (original) The network of claim 2, wherein, for at least one remote location, said two transformers at the remote end of said cable are directly or indirectly attached to, or housed inside, the respective remote digital device.

6. (original) The network of claim 2, wherein, for at least one remote location, said two transformers at the remote end of said cable are directly or indirectly attached to, or housed inside, the respective remote telephone device.

7. (original) The network of claim 2, wherein said transformers at the near ends of each cable are directly or indirectly attached to, or housed inside, the central digital device.

8. (original) The network of claim 2, wherein said transformers at the near ends of each cable are directly or indirectly attached to, or housed inside, the central telephone device.

9. (original) The network of claim 1, wherein each of said data channels conforms to the IEEE802.3 standard.

10. (currently amended) A circuit for providing simultaneous packet based digital data- and analog telephone communication between two locations in a building over a local area network wiring in the building, said circuit comprising:

a plurality of pairs of conductors, opposite ends of each pair of conductors being at respective ones of the two locations and each pair being operative as a respective data channel for carrying packet based digital data signals between the two locations;

at least two of said pairs cooperatively forming at least one phantom channel, operative to carry analog telephone signals between the two locations; and

circuitry connected to said plurality of pairs of conductors for supplying packet based digital data signals to

each said data channel and analog telephone signals to said at least one phantom channel.

11. (original) The circuit of claim 10, further comprising a signal transformer at each end of each of said at least two pairs of conductors, each signal transformer having a primary winding and a secondary winding, the primary winding having a center-tap, wherein:

said at least two pairs of conductors are connected at each of their ends to respective ends of the primary winding of a respective signal transformer, and  
respective ends of the secondary winding of each of said signal transformers form connection points to a corresponding one of said data channels and said center-taps form connection points to a corresponding one of said at least one phantom channel.

12. (original) The circuit of claim 10, including at least two pairs of conductors and a single phantom.

13. (currently amended) The circuit of claim 10, wherein said plurality of pairs is N pairs and said at least one phantom channel is N-1 phantom channels, where N is equal to or greater than 3.

14. (currently amended) For a digital data communication local area network that comprises at least one cable in a building between a first location and a second location in the building, each cable including at least two pairs of conductors, each pair providing a ~~packed~~packet based digital data communication channel between respective digital devices at the two locations - a kit for additionally and

simultaneously providing, over said at least two pairs of conductors of ~~any of the~~ at least one cable, ~~aan~~ an analog telephone channel between respective analog telephone devices, said kit comprising at least two pairs of signal transformers, at least one pair for each end of the cable, and each transformer having a primary winding and a ~~second~~ secondary winding, the primary winding having a center-tap, wherein:

    respective ends of the primary winding of each of said signal transformers are adapted to be connected to a respective end of said pairs of conductors,

    respective ends of the secondary winding of two of said signal transformers are adapted for connection to a remote digital device, and

    respective center-taps of each ~~of~~ pair of signal transformers are adapted for connection to a respective analog telephone device.

15. (original) The kit of claim 14, wherein at least one pair of signal transformers is housed in a discrete module.

16. (original) The kit of claim 15, wherein the discrete module is packaged in a wall connector which is directly or indirectly attachable to a surface of a building.

17. (previously presented) The kit of claim 16, wherein the wall connector is dimensioned to ~~conform to an existing~~ be installed in a cavity for a wall connector of a data communication network.

18. (previously presented) The kit of claim 16, wherein the wall connector includes:

a first female connector having at least two pairs of contacts and a second female connector having at least one pair of contacts disposed proximate the first female connector,

at least one pair of signal transformers, each having a primary winding whose ends are adapted to be connected to respective conductor pairs,

a secondary winding of each signal transformer connected to a respective one of the pair of contacts of the first female connector, and

respective center-taps of each of the two primary windings connected to a corresponding pair of the at least one pair of contacts in the second female connector.

19. (original) The kit of claim 18, wherein the wall connector is a substitute socket outlet.

20. (original) The kit of claim 18, wherein the wall connector is a plug assembly further including:

a plug having at least two pairs of contacts each connected to the primary windings of a respective one of the signal transformers for removably coupling with a socket outlet of a data network.

21. (currently amended) A digital device, connectable to at least two pairs of conductors for conveying packet based digital data therethrough to and from at least one other digital device in a local area network in a building, the digital device being also connectable to at least one local analog telephone device and operative to transmit analog

signals between said at least one local analog telephone device and at least one other analog telephone device over said at least two pairs of conductors in a phantom channel mode.

22. (original) The digital device of claim 21, comprising at least two signal transformers, each having a center-tapped primary winding, whose ends are connectable to a corresponding one of said pairs of conductors and whose center-tap is connectable to said at least one local telephone device.

23. (original) A combination outlet for pluggably connecting a digital device and ~~a~~ an analog telephone device to respective ends of at least two conductor pairs so as to be able to simultaneously convey data signals to and from the digital device and analog telephone signals to and from the analog telephone device, the outlet comprising:

~~a first female wiring connector for connecting to the two conductor pairs; having at least two pairs of contacts and a second female connector having at least one pair of contacts disposed proximate the first female connector,~~

a data connector having at least two pairs of contacts for connecting to the data device;

an analog telephone connector having at least one pair of contacts for connecting to the analog telephone device, said analog telephone connector being disposed proximate to said data connector; and

at least one pair of signal transformers, each transformer having a primary winding provided with a center tap and a secondary winding,  
wherein:

~~whose~~the ends of each of said primary windings are  
coupled to said wiring connector,~~adapted to be connected to~~  
~~respective conductor pairs,~~

a~~said~~ secondary winding of each signal transformer is  
connected to a respective ~~one of the pair of contacts of said~~  
data~~the first female~~ connector, and

respective center-taps of each of the two primary  
windings are connected to the pair of contacts in ~~the second~~  
~~female~~said analog telephone connector.

24. (original) The combination outlet of claim 23, being  
dimensioned to conform to an existing wall connector of a data  
communication network.

25. (original) The combination outlet of claim 23, being  
disposed within a plug assembly further including:

a plug having at least two pairs of contacts each  
connected to the primary windings of a respective one of the  
signal transformers for removably coupling with a socket  
outlet of a data network.

26. (currently amended) A method for enabling a bundle of at  
least two pairs of conductors, which are normally operative to  
convey packet based digital data between at least two digital  
devices in a local area network in building, to also and  
simultaneously convey analog signals between at least two  
analog telephone devices, the method comprising:

- (a) providing a first connection of a phantom channel in  
association with the at least two pairs of conductors  
at a first end ~~thereof~~ said at least two pairs of  
conductors, and



- (b) providing a second connection of a~~the~~ phantom channel in association with the at least two pairs of conductors at a second end ~~thereof~~ of the at least two pairs of conductors;

thus allowing two analog telephone devices to be connected to the first and second ~~phantom channels~~ connections, respectively.

27. (currently amended) The method of claim 26, wherein steps (a) and (b) comprise:

- (i) inserting a first pair of signal transformers having center-tapped primary windings at a first end of the cable, with respective ends of the primary windings connected to respective conductors of the cable; and
- (ii) inserting a second pair of signal transformers having center-tapped primary windings at a second end of the cable, with respective ends of the primary windings connected to respective conductors of the cable;

thereby allowing respective secondary windings of each signal transformer to be connected to the digital devices and allowing the respective center-taps of the signal transformers to be connected to the the analog telephone ~~equipment~~ devices.